

International Application No.: PCT/JP2003/009420
U.S. Patent Application No.: Unknown
February 25, 2005
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IN THE ABSTRACT:

Please replace the Abstract of the Disclosure originally filed with the above-identified patent application with the following Abstract:

ABSTRACT OF THE DISCLOSURE

~~Ground~~A line converter includes ground conductors ~~4g~~ and ~~5g~~, a transmission-line conductor ~~4a~~ and a coupling-line conductor ~~4k~~ are formed disposed on a dielectric substrate ~~3~~. A dielectric-filled waveguide includes a lower conductor plate ~~1~~, an upper conductor plate ~~2~~, a lower dielectric strip ~~6~~, and an upper dielectric strip ~~7~~, where the dielectric substrate ~~3~~ is sandwiched between the lower conductor plate ~~1~~ and the lower dielectric strip ~~6~~, and the upper conductor plate ~~2~~ and the upper conductor strip ~~7~~, so that a conductor part portion ~~S~~ that is part of the ground conductors of the dielectric substrate ~~forms~~ defines a shield area of the dielectric-filled waveguide. The coupling-line conductor ~~4k~~ is coupled to a standing wave ~~caused~~ generated by the shield area, at a position where the electric-field intensity of the standing wave is high. Subsequently, a plane circuit can be ~~provided~~ arranged so as to ~~be~~ be substantially parallel to the direction in which an electromagnetic wave propagates through the three-dimensional waveguide. Further, the dielectric substrate can be easily machined and the characteristic of coupling between the plane circuit and the three-dimensional waveguide provided on the dielectric substrate is prevented from being affected by the precision of assembling the plane circuit and the three-dimensional waveguide so that a line-conversion characteristic according to a predetermined design can be easily obtained.